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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,635	02/04/2004	Evgueni Kolossov	LA-7384-103US	5655
167	7590	05/02/2007	EXAMINER	
FULBRIGHT AND JAWORSKI LLP			ZHOU, SHUBO	
555 S. FLOWER STREET, 41ST FLOOR			ART UNIT	PAPER NUMBER
LOS ANGELES, CA 90071			1631	
MAIL DATE		DELIVERY MODE		
05/02/2007		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/772,635	KOLOSSOV ET AL.
	<b>Examiner</b> Shubo (Joe) Zhou	<b>Art Unit</b> 1631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 2/16/07, 10/31/06.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-13 and 15-22 is/are pending in the application.
  - 4a) Of the above claim(s) 1-8 and 17-19 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 9-13, 15-16, and 20-22 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 31 October 2006 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### *Amendments*

Applicant's amendments and request for reconsideration in the communication filed 2/16/07 and 10/31/06 are acknowledged and the amendments have been entered.

Claims 1-13 and 15-22 are currently pending, and claims 9-13, 15-16 and 20-22 are under examination.

This application contains claims 1-8 and 17-19 drawn to an invention nonelected with traverse in the communication filed 6/7/06. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

### *Withdrawn Rejections*

The rejection of claims 10-12 and 14 under 35 U.S.C. 112, second paragraph, set forth in the previous Office action mailed 7/31/06, is hereby withdrawn in view of applicant's amendment to the set of claims filed 10/31/06.

### *Claim Rejections-35 USC § 101*

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 9-13, 15-16 and 20-22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

This rejection is reiterated from the previous Office action mailed 7/31/06.

The claims are drawn to a process, or a computer program product for executing the process, wherein the process comprises performing cluster analysis on 2-dimensional or 3-dimensional data using a distance metric for the distance between two points with a special equation, as recited in the independent claim 9 and outputting the results of the analysis.

Since the claimed invention involves mathematical calculations, which is interpreted as judicial exception in terms of patent subject matter eligibility, the following analysis of facts of this particular patent application follows the rationale suggested in the "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (OG Notices: 22 November 2005, available from the US PTO website at <http://www.uspto.gov/web/offices/com/sol/og/2005/week47/og200547.htm>).

The Guidelines states:

*To satisfy section 101 requirements, the claim must be for a practical application of the § 101 judicial exception, which can be identified in various ways (Guidelines, p. 19):*

- *The claimed invention "transforms" an article or physical object to a different state or thing.*
- *The claimed invention otherwise produces a useful, concrete and tangible result, based on the factors discussed below.*

In the instant case, the claimed invention merely manipulates the 2-dimensional or 3-dimensional data by performing a cluster analysis using a special distance metric including a series of mathematical calculations in a computer. The process does not transform an article or physical object to a different state or thing outside the computer.

Furthermore, the invention does not produce a useful, concrete and tangible result. Specifically at least one embodiment of the claimed invention does not produce a tangible result. Since the process merely manipulates and converts the 2-dimensional or 3-dimensional data by doing a series of calculations of performing a cluster analysis using a special equation to another set of data, the result of the invention is a set of data, which, in itself, is not tangible.

Additionally, claims 20-22 are drawn to “computer program product” for performing the process of claim 9. Absent an explicit definition for the term “computer program product” indicating otherwise in the specification, the term is interpreted as including merely a computer program, i.e. the software, without being on a computer readable medium. Thus, at least one embodiment of the claimed invention is a computer program, per se, i.e. the software, without the computer readable medium, which is nonstatutory. See MPEP 2106.

Applicant’s arguments filed 10/31/06 have been fully considered but they are not persuasive.

Applicant argues that each claim is directed to a method of analyzing chemical data on a computer, which is a practical application for identifying properties and activities of chemical compounds, and that the claims are not directed to an abstract idea, but are directed to methods that have a tangible, beneficial result. Applicant maintains that the claims are thus directed to proper statutory subject matter. See page 10 of the response filed 10/31/06.

This is found unpersuasive because, firstly, not all method of analyzing chemical data on a computer is a practical application of a judicial exception. As set forth in the previous Office action, mailed 7/31/06, on page 4-5, and reiterated above, a practical application of a judicial exception, based on the Office’s "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" and the pertinent court decisions cited therein, can only be accomplished by either that the claimed invention transforms an article or physical object to a different state or thing, i.e. physical transformation, or that the claimed invention produces a

useful, concrete and tangible result. However, the claimed invention does not accomplish a physical transformation for reasons set forth above. Furthermore, at least one embodiment of the claimed invention does not produce a tangible result because the result produced thereby is a set of data, which, *per se*, is not tangible. While the claims are now amended to include a limitation that the results of the analysis is outputted, at least one embodiment of the claimed invention is still not tangible because it depends on the consequence of the outputting. If the result, i.e. the intangible data, is outputted to a user to use or to a memory, etc., to be stored and to make it available to be used, it would be tangible. If the result is outputted to a carrier wave, which is interpreted as a signal (see the “Guidelines” and MPEP 2106), the outputted intangible data would be still intangible.

With regard to claims 20-22, applicant argues that a person skilled in the art would understand from the context of the specification that a computer program product is a computer readable medium, not just software. This is not persuasive because while a computer program product could be a computer readable medium having thereon the computer program, i.e. the software, the software, *per se*, could also be interpreted as a computer program product. The instant application does not provide an explicit definition for the phrase “computer program product.” The word “product” is defined in “The American Heritage® Dictionary of the English Language: Fourth Edition, 2000” as “1. Something produced by human or mechanical effort or by a natural process” (retrieved from the website <http://www.bartleby.com/61/8/P0580800.html> on 4/28/07). Since a computer program, i.e. the software, could be produced by human and recorded on a paper file, it could thus be interpreted by one skilled in the art to be a computer program product.

***Conclusion***

No claim is allowed.

**THIS ACTION IS MADE FINAL.**

Applicants are reminded of the extension of time policy as set forth in 37 C.F.R. §1.136

(a). A shortened statutory period for response to this final action is set to expire three months from the date of this action. In the event a first response is filed within two months of the mailing date of this final action and the advisory action is not mailed until after the end of the three-month shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 C.F.R. §1.136 (a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than six months from the mailing date of this final action.

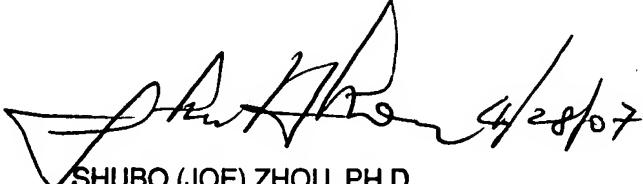
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shubo (Joe) Zhou, whose telephone number is 571-272-0724. The examiner can normally be reached Monday-Friday from 8 A.M. to 4 P.M. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla, Ph.D., can be reached on 571-272-0735. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of

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sz/SZ



SHUBO (JOE) ZHOU, PH.D.  
PATENT EXAMINER